

What is Claimed is:

1. A packaging unit in the form of a container with a closure cap for two substances to be stored separately from each other and mixed together before use, particularly a liquid and a powdered substance, comprising

a first bottle-like container (1) with a belly region, a shoulder region (2) and a bottle neck which constitutes a constriction (7) or in which a constriction is formed,

an end opening region (3) at the upper end of the bottle neck, which has a screw thread (6) at the end on its outside,

a second container (4) for the powdered substance, arranged in the bottle neck (7) of the container, and

a closure cap (5) covering the opening region,

characterised in that

the second container (4) comprises a pot-shaped lower part (8) sealed at the bottom, the maximum external diameter of which is less than the internal diameter of the constriction, and

an adjacent upper region open at the top which optionally has a central and an upper part,

the second container in its upper region has at least one region the external diameter of which is the same size or greater than the internal diameter of the constriction (7), and

this region is located inside or below the constriction when the packaging unit is in its initially sealed state, and

the upper part of the second container is closed off by a cup-like or cylindrical lid which can be inserted in the opening in the upper part and totally removed therefrom, and which can be frictionally connected to the interior of the closure cap or is an integral part thereof, and

the second container has, above the region with an external diameter which is the same size as or greater than the internal diameter of the constriction, a second region the external diameter of which is smaller than the internal diameter of the constriction and

the height of this region is greater than the height of the constriction.

2. The packaging unit according to claim 1, characterised in that the lid (12) is not an integral part of the closure cap (5).
3. The packaging unit according to claim 1, characterised in that the second container can be moved axially in the bottle neck.

4. The packaging unit according to claim 1, characterised in that the bottle neck constitutes the constriction and has a constant internal diameter or an internal diameter which widens continuously from the opening region (3) to the shoulder region.
5. The packaging unit according to claim 1, characterised in that in the bottle neck is formed a constriction (7) which has an internal diameter which is less than the internal diameter of the other regions of the inner surface of the bottle neck.
6. The packaging unit according to claim 5, characterised in that the constriction (7) is formed immediately above the shoulder region.
7. The packaging unit according to claim 6, characterised in that the constriction (7) is formed immediately below the opening region (3).
8. The packaging unit according to claim 7, characterised in that the constriction (7) is formed as an annular peripherally encircling, inwardly directed elevation with recesses on the inner surface of the bottle neck.
9. The packaging unit according to claim 1, characterised in that the constriction (7) is formed as an annular elevation running peripherally around the inner surface of the bottle neck without any recesses.

10. The packaging unit according to claim 1,
characterised in that the region of the upper
region of the second container, whose external
diameter is less than the internal diameter of the
constriction (7) in the originally closed state of
the packaging unit is preferably above the
constriction (7) and is higher than the height of
the constriction (7).
11. The packaging unit according to claim 1,
characterised in that
 - the second container (4) comprises a pot-shaped
lower part (8), a central part (9) with a greater
external diameter than the lower part and a
cylindrical upper part (10) with two or more
axially extending recesses (11) which are upwardly
unlimited, at least on the inside of the upper
part (10),
 - the opening of the second container (4) with a
cup-like or cylindrical lid (12) is closed off by
tight clamping underneath the recesses (11) and
the remainder of the cylindrical upper part (10)
projects over the lid, the lid has a cup-shaped
depression on its upper side and flange-like
projections (13) are formed on the lid, which pass
through the recesses (11) in the upper part (10)
and abut on the upper side of the constriction (7)
or above it,
 - the closure cap (5) comprises an outer cylinder
(14) with an internal screw thread (15) and,
integrally formed thereon, an inner cylinder (16)

with a sealed base region (17), the inner cylinder (16) engages in the opening region (3) of the first container (1) and abuts on the top end of the cylindrical upper part (10) of the second container (4), and

- the second container (4) is held in frictionally locking manner with its central part (9) in the cylindrical constriction (7) of the first container (1) in such a way that by rotating the closure cap (5) into the first container (1) the second container (4) is pushed by the pressure of the inner cylinder (16) onto the top end of the cylindrical upper part (10) of the second container into the first container until the lid (12) is released from the clamping and closing position and the now freed opening of the second container (4) can communicate with the interior of the first container possibly through the recesses (11).

12. The packaging unit according to claim 1, characterised in that the upper region has a central part and an upper part and the upper part (10) of the second container has at least one region whose external diameter is the same size or greater than that of the central part (9).

13. The packaging unit according to claim 1, characterised in that on the sealed base region (17) of the inner cylinder (16) of the closure cap (5) is formed a cylindrical projection (18) which is of a suitable size for engagement in the cup-like depression in the lid (12), so that after

being released from the second container (4) this lid is held clamped by the closure cap (5).

14. The packaging unit according to claim 1, characterised in that the upper region has a central part and an upper part and the axial dimension of the lid (12) is greater than the axial dimension of the bead-like thickened central part (9) or of the constriction (7) of the first container (1) and in that the lid (12) engages in the pot-shaped lower part (8).
15. The packaging unit according to claim 14, characterised in that the upper region has a central part and an upper part and the upper part (10) has an external diameter which is less than the internal diameter of the constriction (7) of the first container (1), so that after being released from the constriction (7) it can drop into the first container (1).
16. The packaging unit according to claim 15, characterised in that the upper region has a central part and an upper part and the axial dimension of the lid (4) is equal to the axial dimension of the bead-like thickened central part (9) and in that the lid (4) engages in the central part (9).
17. The packaging unit according to claim 16, characterised in that the upper region has a central part and an upper part and the upper part (10) has at its end an outwardly directed encircling flange (19) and on the outside,

directly underneath the flange (19) it has a second bead-like thickening (20) or an external diameter the same size as the external diameter of the central part (9).

18. The packaging unit according to claim 17, characterised in that after being moved axially downwards over the encircling flange (19) the second container rests on the upper side of the constriction (7) of the first container (1) and is held in the constriction (7) of the first container (1) by means of the second bead-like thickening (20) and/or by virtue of its external diameter.
19. The packaging unit according to claim 18, characterised in that the axially extending recesses (11) in the upper part (10) of the second container (4) extend right into the encircling flange (19) and recesses for the flange-like projections of the lid (13) are also provided in the encircling flange (19).
20. The packaging unit according to claim 19, characterised in that the axial length of the recesses (11) in the upper part (10) is greater than the axial height of the cylindrical constriction (7).
21. The packaging unit according to claim 1, characterised in that
 - the second container (4) comprises a pot-shaped lower part (8), a central part (9) with a greater external diameter than the lower part and a

cylindrical upper part (10) with one or more axially extending recesses (11) and with an annular, peripherally encircling flange (17) or at least one outwardly directed projection (17) at the top end, while at least the region underneath the flange (17) or the minimum of one projection (17) has an external diameter which is at least equal to that of the central part and

- the second container (4) is tightly sealed off with a cup-like lid (12) by tight clamping,
- the closure cap (5) comprises an outer cylinder (14) with an internal screw thread (15) and a cylindrical projection (18) formed thereon, the cylindrical projection (18) engages in the opening region (3) of the first container (1) and rests above the cup-shaped top region of the lid (12), and
- the second container (4) is frictionally secured with its central part (9) in the cylindrical constriction (7) of the first container (1) so that by rotating the closure cap (5) into the first container (1) the cylindrical projection (18) pushes the second container (4) by pressure on the lid (12) until the flange or minimum of one projection (17) rests on the top edge of the constriction (7) and the upper outer region of the upper part of the second container is frictionally connected to the constriction (7), while at the same time the cylindrical projection (18) also engages frictionally in the cup-shaped upper part of the lid (12) in such a way that after removal

of the closure cap the lid (12) is moved along by the cylindrical projection (18) and the now exposed opening of the second container (4) can communicate with the interior of the first container, optionally via the recesses (11).

22. The packaging unit according to claim 21, characterised in that the axial length of the recesses (11) in the upper part (10) is greater than the axial height of the cylindrical constriction (7).
23. The packaging unit according to claim 1, characterised in that
 - the second container (4) comprises a pot-shaped lower part (8) with a - preferably downwardly chamfered wedge-shaped - barb-like member which is situated underneath the constriction (7) in the initially sealed state of the packaging unit and which has an external diameter which is at least slightly greater than the internal diameter of the constriction (7), and a cylindrical upper part (10) the external diameter of which is less than the internal diameter of the constriction (7),
 - the second container is sealed by a releasable lid which is frictionally connected to the inside of the closure cap or is an integral part thereof,
 - so that in the initially sealed state of the packaging unit the lower part (8) of the second container is located underneath the constriction (7) and the upper part is connected to the closure cap (5) through the constriction (7).

24. The packaging unit according to claim 23, characterised in that in the inner cylinder (16) of the closure cap (5) is provided a metering aid, preferably a measuring cup (21), which is frictionally secured therein.
25. The packaging unit according to claim 24, characterised in that a removable safety ring or the like is provided in known manner between the outer cylinder (14) of the closure cap (5) and the shoulder region (2) of the first container (1).
26. The packaging unit according to claim 25, characterised in that the packaging unit is made of plastics, preferably non-transparent plastics.
27. The packaging unit according to claim 26, characterised in that the first and second containers (1, 4) and the lid (12) are made of a plastics based on polyethylene, preferably high density polyethylene.
28. The packaging unit according to claim 27, characterised in that the closure cap (5) and the measuring cup (21) contained therein are made of a plastics based on polypropylene.
29. The packaging unit according to claim 28, characterised in that the lid (12) or optionally the region of the closure cap (5) acting as a lid comprises, on its outside which provides the sealing effect with the second container, an annular, peripherally encircling sealing region

(22) and axially below it a region which has at least one axially directed recess (24) which extends from the base of the lid (12) to the peripherally encircling sealing region (22).

30. The packaging unit according to claim 29, characterised in that axially underneath the annular, peripherally encircling sealing region (22) are formed axial webs (23) which define a peripherally encircling region have the same external diameter as the external diameter of the sealing region, this region comprising, between the webs (23), axially directed recesses (24) which extend from the base of the lid (12) to the peripherally encircling sealing region (22).
31. The packaging unit according to claim 30, characterised in that the axially directed recesses (24) are wider than the webs (23) between them.
32. The packaging unit according to claim 31, characterised in that the peripherally encircling sealing region (22) is formed underneath the top edge of the outside of the lid (12) or of the region of the closure cap (5) which serves as a lid, forming a seal with the second container.
33. The packaging unit according to claim 32, characterised in that the lid (12) is an integral part of the closure cap (5).
34. The packaging unit according to claim 33, characterised in that the external diameter of

the second container above the barb-like member is approximately the same as the internal diameter of the constriction (7), so that at this point the second container is securely held in the constriction (7) in the original sealed state of the packaging unit.